REMARKS

The Office Action dated July 24, 2008 has been received and carefully noted. The following remarks, are submitted as a full and complete response thereto.

Claims 12-30 and 33-55 are presently pending in the application and are respectfully submitted for reconsideration. No new matter has been added and no new issues are raised which require further consideration or search.

Claims 38, 44, 48 and 52 have been again rejected under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is respectfully addressed in detail below.

The Abstract and the last four lines of claim 38 both clearly indicate that the transmission power is decreased when the pseudo error occurrence is under a predetermined threshold and the transmission power is increased when the pseudo error occurrence is above a predetermined threshold. The Abstract specifically describes that "The transmission power is then decreased when the rate of the pseudo errors is below a predetermined threshold and increased when pseudo errors occur so that a predetermined criterion is fulfilled." In the Abstract, the decrease in the transmission power is described as being performed in accordance with the word "when", which refers to the time period that the pseudo error occurrence is below a predetermined threshold.

Alternatively, the claim recitations do not use the word "when" and instead use the word "until" to describe the time period that the transmission power is reduced. In the case of using the word "until", the claim recitations demonstrate the time period before the predetermined threshold is met and the time that the threshold is actually met; hence,

the interpretation of the word "until." Therefore, a person of ordinary skill in the art would conclude that the pseudo power level is decreased "until" the pseudo error occurrence is above a predetermined level, at which time the decreasing must cease and the increase in the transmission power level must occur. In conclusion, the subject matter of claim 38, and similarly claims 44, 48 and 52 is the same as the subject matter included in the Abstract because, although, the wording is different, both the Abstract and the claims recitations yields the same result. Withdrawal of the rejections to the claims is kindly requested.

Claims 12-17, 19, 24, 27-30, 33-34, 36-38 and 41-55 were rejected under 35 U.S.C. §102(a) as being anticipated by Vembu (U.S. Patent No. 6,259,928). This rejection is respectfully traversed for at least the following reasons.

Initially, Applicants note that Vembu does not disclose a "pseudo error" anywhere in its disclosure. Furthermore claim 12, for example, explicitly defines a "pseudo error" by reciting that "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." As will be discussed below, Vembu does not disclose a "pseudo error" and certainly not using a "pseudo error" to control transmission power, as recited, in part, in independent claim 12, and similarly in independent claims 24, 27-30, 33-38, 44, 48 and 52.

The Response to Arguments section of the Office Action again relied on columns 5-8 and 10 of Vembu as allegedly disclosing the subject matter of independent claims 12,

24, 27-30, 33-38, 44, 48 and 52. Applicants disagree that those portions of any other portions of Vembu disclose all of the subject matter of the claims. In addition, Applicants submit that "pseudo error" being regarded as inherent is improper. Applicants disagree that monitoring a pseudo error occurrence is at all inherent to those having ordinary skill in art.

As stated above independent claim 12 explicitly recites that "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." The pseudo error recited in claim 12 is not inherent to a conventional error detection and power transmission control process. As noted above, a pseudo error occurs when a right bit or symbol was made but the margin that defines the right bit or symbol decision was smaller than a limit value. None of the subject matter disclosed in columns 5-8 and 10 of Vembu disclose an type or pseudo error or any inherent interpretation of a pseudo error, as recited in the claims. Below is a discussion regarding the exact portions of columns 5-8 and 10 considered pertinent by the Office Action and reasons why none of those portions of Vembu disclose the subject matter recited in the claims.

Column 5, line 65 through column 6, line 2 discloses

> "Conversely, when SNR 208 rises above threshold 204, power is incrementally decreased. Power adjustments are made using commands or control and operation techniques known in the art."

As can be seen from the above-noted portion of columns 5 and 6, a SNR is measured against a predefined threshold 204, and power is incrementally decreased if the SNR rises

above the predefined threshold. This method of power decreasing does not represent any type of error detection. In addition, there is no disclosure that an error detection is performed that could be interpreted as being comparable to a particular type of "pseudo error" detection that is different from an actual error detection.

Pages 19 and 20 of the Office Action refer to column 7, lines 4-16, which discloses

> "If SNR 208 of the received signal is above threshold 204, the power is adjusted down and the operation returns to step 304 where receiver 108 continues to receive the transmitted signal. This is illustrated by step 310 and flow line 362. If SNR 208 is at threshold 204 and, therefore, no adjustment is necessary, the operation returns to step 304 as illustrated by flow line 364. In one embodiment, threshold 204 is not implemented as a single value, but instead encompasses an acceptable range of SNR values. If, on the other hand, SNR 208 is below threshold, operation of the invention proceeds to a step 312. In step 312, receiver 112 determines whether or not the degradation in SNR 208 is greater than nominal. In other words, receiver 112 determines whether or not SNR 208 is more than an acceptable amount below threshold 204..."

As can be seen from the above-noted portion of column 7, a SNR is again described as being measured against a predefined threshold 204, and power is incrementally decreased if the SNR rises above the predefined threshold. In this example, the threshold 204 is described as being within a range of values as opposed to one particular value. Also, a causal analysis is performed to determine the amount of actual degradation in the SNR 208, which is then compared to what would be considered an acceptable amount of degradation. These two analyses of the SNR do not disclose a pseudo error which is explicitly defined as "an instant when a right bit or symbol decision was made, but a

margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Again, no discussion is made as to a particular type of "pseudo error" detection that is different from an actual error detection.

Pages 19 and 20 of the Office Action refer to column 8, lines 5-10 which discloses

> "In the embodiments described above, receiver 112 is described determining whether or not the system is at, above or below threshold and whether the system is operating nominally. In this embodiment, receiver 112 (112a, 112b) sends a command to transmitter 108 (108b, 108a) instructing transmitter 108 to change modes when appropriate."

In this example of column 8, a determination is made as to whether the system is at, below or above a threshold value, and whether it is operating "nominally", and, if necessary, the transmitter 108 is instructed to change modes. Yet further, no discussion is made as to a particular type of "pseudo error" detection that is different from an actual error detection.

Pages 19 and 20 of the Office Action refer to column 10, lines 54-59 which discloses

> "Because it is likely that the condition of SNR 208 being below threshold 204 resulted in the unacceptably high error rate (determined in step 408 above), threshold 204 is not increased. As such, the system continues to operate as normal using the power control mode to control the power in step 412."

In this example of column 10, a determination is made that the SNR 208 is below a threshold 204 which resulted in an unacceptably high error rate. Furthermore, a decision is made not to increase threshold 204, and the system will operate as "normal", and the power control mode is used to control the power level. Yet further still, no discussion is

made as to a particular type of "pseudo error" detection that is different from an actual error detection.

As can bee seen from the above-noted portions of the disclosure of Vembu, power is controlled on the basis of the SNR and error rate measurements. Column 10, lines 54-59 of Vembu, for example, refers to controlling transmission power on the basis of frame error rate. Similarly, column 10, lines 14 and 15 of Vembu refers to controlling power on the basis of bit error rate. The power control methods of Vembu are directed to the type of prior art that the pseudo error techniques of the present application are aimed at surpassing.

A pseudo error is described on page 3 of the present application as a type of error that has **not** yet occurred. In contrast to a pseudo error, the teachings of Vembu which are directed to SNR, bit error rate and frame error rate all rely on errors which have already occurred. The techniques used to control the power level in Vembu do not address pseudo error monitoring (i.e., monitoring of errors that have not yet occurred) of any kind.

The Office Action stated that "a pseudo error [is] (inherent)." Applicants disagree that a pseudo error is inherent. The fact that Vembu relies on actual measurements of SNR or error rates of signals received to control power levels clearly shows that Vembu cannot control power (either increase or decrease power) based on a "pseudo error." In referring to a pseudo error as inherent, the Office Action has alleged that the following description of a "pseudo error" is inherent, as claim 12 recites a pseudo error "as an

instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Applicants submit that the above noted portion of claim 12 which describes the pseudo error is not well known to one skilled in the art.

Furthermore, the claims explicitly recite a definition of what a "pseudo error" actually is and how it is part of the process for setting the transmission power. The clear definition of "pseudo error" is recited in claim 12 as "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." The clearly defined pseudo error cannot be ignored or rendered inherent without each of the portions of the above-noted definition being addressed in their entirety. The Office Action's attempt to ignore the accurately defined elements of the "pseudo error" by labeling them inherent is clearly improper.

Therefore, the Office Action has failed to establish a "pseudo error" as inherent, and by relying on the teachings of Vembu, has further failed to anticipate the subject matter recited in independent claim 12, and similarly independent claims 12, 24, 27-30, 33, 34, 36-38, 44, 48 and 52. By virtue of dependency the rejection of claims 13-17, 19, 41-51 and 53-55 is also improper and must be withdrawn.

Claims 18 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of U.S. Patent No. 5,873,028 of Nakano et al. ("Nakano"). The Office Action took the position that Vembu discloses all of the features of the claims except "the

predetermined step is 1 dB" and "the predetermined amount for increasing the transmission power is 1 or 2 dB." The Office Action cited Nakano to remedy these deficiencies of Vembu. Applicants respectfully traverse this rejection.

Claims 18 and 20 depend from and further limit claim 12. The deficiencies of Vembu with regard to claim 12 are exposed above. Nakano does not remedy the above-identified deficiencies of Vembu with regard to claim 12, and, thus, the combination of Vembu and Nakano fails to disclose or suggest all of the elements of any of the presently pending claims.

Nakano generally relates to a transmission power control apparatus and method in a mobile communication system. Nakano describes suppressing the transmission power to an absolute necessary minimum level and increasing subscriber capacity by reducing an amount of interference. For example, the transmission power of a first mobile station 1a is controlled such that a difference between a reception CIR at first base station 3a with respect to first mobile station 1a and first base station target CIR becomes smaller, while the transmission power of the second mobile station 1b is controlled such that a difference between a reception CIR at first base station 3a with respect to second mobile station 1b and a second base station target CIR becomes smaller. At column 6, lines 24-40, Nakano does describe adjusting transmission power control, but specifically states the steps are 0.5 dB, at column 6, line 27 ("at 0.5 dB steps"). One half decibel is clearly not one decibel.

Applicants respectfully submit that, as explained above, Vembu does not inherently or otherwise disclose or suggest a predetermined step, and therefore, even if Nakano had disclosed 1 dB steps (as recited in claim 18), one of ordinary skill in the art would not be motivated to combine Nakano with Vembu, because Vembu does not describe reducing the transmission power in predetermined steps.

Moreover, Nakano does not remedy the above-described deficiencies of Vembu with regard to claims 12 and 17. Accordingly, Applicants respectfully submit that the Office Action's citation of column 6, lines 25-41, column 7, lines 38-43, column 5, lines 13-24, column 8, lines 51-58, column 9, lines 55-60, column 10, lines 31-37, column 1, lines 14-16, and Figure 6 of Nakano, is misplaced because those passages do not address the above-identified deficiencies of Vembu. Therefore, Applicants respectfully request that the rejection of claim 18 be withdrawn.

Claim 20 depends from claim 12. The Office Action cited Vembu as applied to claim 12, but took the position that Vembu fails to disclose only "the predetermined amount for increasing the transmission power is 1 or 2 dB."

Nakano does not remedy the above-described deficiencies of Vembu with regard to claim 20 because Nakano does not even cure the deficiencies of Vembu with respect to claim 12, and thus by virtue of dependency, Nakano also fails to teach the subject matter recited in claim 20. Applicants respectfully submit that the Office Action's citation of column 6, lines 25-41, column 7, lines 38-43, column 5, lines 13-24, column 8, lines 51-58, column 9, lines 55-60, column 10, lines 31-37, column 1, lines 14-16, and Figure 6 of

Nakano, is misplaced because those passages do not address the above-identified deficiencies of Vembu. Therefore, Applicants respectfully request that the rejection of claim 20 be withdrawn.

Claims 21, 22, 25, 26, 39 and 40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of U.S. Patent No. 5,878,329 of Mallinckrodt ("Mallinckrodt"). The Office Action took the position that Vembu discloses all the features of the claims, except those related to forward error correction. The Office Action cited Mallinckrodt to remedy the deficiencies of Vembu with respect to the features related to forward error correction. Applicants respectfully traverse this rejection.

Vembu is discussed above. Mallinckrodt generally relates to power control of an integrated cellular communications system. Mallinckrodt describes the power controlled by monitoring the bit error rate and the signal-to-noise ratio. Mallinckrodt describes controlling the power output levels of transmitters to a minimum necessary for satisfactory communications. Each transmission includes a code representative of the transmitter output level. The receivers compare this code to the received signal strength and adjust their associated transmitter power output levels accordingly. The bit error rate and the signal-to-noise ratio are monitored by receivers to develop a measure of signal quality.

Claims 21, 22, 25, 26, 39 and 40 are dependent on independent claim 12, 24 and 38 and contain all of the limitations thereof. As discussed above, the teachings of Vembu

fail to disclose or suggest all of the elements of claims 12, 24 and 38. In addition, Mallinckrodt fails to cure the deficiencies in Vembu as Mallinckrodt also fails to disclose or suggest "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Thus, the combination of Vembu and Mallinckrodt fails to disclose or suggest all of the elements of claims 21, 22, 25, 26, 39 and 40. Furthermore, claims 21, 22, 25, 26, 39 and 40 should be allowed for at least their dependence upon claims 12, 24 and 38, and for the specific limitations recited therein.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of (EP 0 847 146 A2) of Endo ("Endo"). The Office Action took the position that Vembu discloses all the features of the claims, except those related to increasing transmission power to a maximum. The Office Action cited Endo to remedy the deficiencies of Vembu with respect to those features. Applicants respectfully traverse this rejection.

As discussed in previous responses, Endo relates to a transmission power control apparatus for a mobile communication system. Endo describes providing a reverse channel error rate judgment section in a radio base station for judging a communication quality of the reverse channel by a detected reverse channel frame error rate. Referring to Figure 1 of Endo, decoder section 105 performs data error detection in a receiving signal digitized by the digital demodulation section 101, and outputs the result of detected errors to reverse channel error rate judgment section 103. Endo describes, if a report is received

indicating a frame error rate of the forward channel being unfavorable, then the transmission power of the forward channel is to be increased. If the report indicates a frame error rate report being too favorable, then the transmission power of the forward channel is decreased to reduce interference.

Claim 23 is dependent upon claim 12 and contains all of the limitations thereof. As discussed above, the teachings of Vembu fail to disclose or suggest all of the elements of claim 12. In addition, Endo fails to cure the deficiencies in Vembu as Endo also fails to disclose or suggest "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Thus, the combination of Vembu and Endo fails to disclose or suggest all of the elements of claim 23. Furthermore, claim 23 should be allowed for at least its dependence upon claim 12, and for the specific limitations recited therein.

Claim 35 was rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of U.S. Patent No. 5,822,318 of Tiedemann ("Tiedemann"). The Office Action took the position that Vembu discloses all of the features of claim 35 except "a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing a redundancy from a received bit stream; and a second output for outputting an error signal indicating corrections made by the apparatus to obtain the corrected bit stream." The Office Action cited Tiedemann, and specifically column 6, lines 59-61, column 7, lines 7-9, 23-29, and 40-54, column 5, lines 35-39, and Figure 3 as disclosing

these features, to remedy these deficiencies of Vembu. Applicants respectfully traverse this rejection.

Vembu is discussed above. Tiedemann generally relates to a method and apparatus for controlling power in a variable rate communication system. Tiedemann describes providing for a closed loop power control method. A first remote station controls the transmission power of a second remote station by transmitting a rate dependent power control signal to the second remote communication station. Because only the second communication knows its transmission rate a priori, it determines its course of action in accordance with both the received power control signal and the knowledge of its transmission rate. Forward error correction decoder 44 of Tiedemann determines an indication of error rate and provides a signal indicative of the error rate to control processor 46. Tiedemann also describes a decoder 56 that has two outputs. Decoder 56 separates two transmitted signals from received data where a second output is for outputting a second signal encoded in the transmission at a transmitting end.

Claim 35 recites, among other things, "a second output configured to output an error signal indicating corrections made by the apparatus to obtain the corrected bit stream." What the Office Action cited as corresponding to this feature is the signal that the decoder 44 sends, which indicates the error rate to the control processor 46, and the two signals (power control signal and traffic data signal) that decoder 56 separates.

However, neither of those decoders (44 or 56) is an output configured to output an error signal that indicates "corrections made by the apparatus to obtain the corrected bit

stream." In the case of decoder 44, what is output is a frame error rate, not an indication of corrections made, as can be seen at column 6, lines 59-61. In the case of decoder 56, what is output is traffic data and a power control signal as can be seen in Figure 3 and at column 7, lines 23-29. Specifically, nowhere does Tiedemann disclose or suggest providing an error signal indicating "corrections made by the apparatus to obtain the corrected bit stream." Accordingly, Tiedemann does not remedy the admitted deficiencies of Vembu.

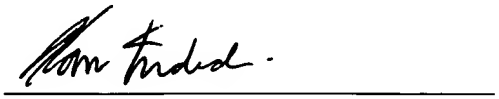
Moreover, claim 35 also recites "the control signal indicating whether pseudo errors are detected in the received signal." As explained above, Vembu does not disclose or suggest any processing of pseudo errors, including any detection of them. Tiedemann also is silent as to the detection or other processing of pseudo errors. Accordingly, Tiedemann also fails to remedy this further deficiency of Vembu. Thus, Applicants respectfully request that the rejection of claim 35 be reversed.

For the reasons explained above it is respectfully submitted that each of the pending claims recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 12-30 and 33-55 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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